

SHIP JUNE 19

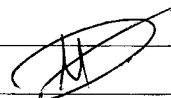
Work Order ID 133765

Wednesday, June 17, 2015 1:02:42 PM

133765

Page 1

Item ID: 647.1305 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible
Start Date: 6/18/15 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 6/19/15 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan:  Date: 5-6-17 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.1300	C (ECN2)								
100	Document Control	0.00	DAS 27 9-89	6 9-89					MLJ 1506-18
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP 647.1305								
									JUN 19 2015
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									JUN 18 2015
									DAS 31 9-89
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
6
9-89 JUN 19 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 133765

Wednesday, June 17, 2015 1:02:42 PM

133765

Page 2

Item ID: 647.1305 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible
Start Date: 6/18/15 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 6/19/15 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 647.1305 Location: _____								DAS 6 9-89
	EXPIRY DATE OF: RTV Loctite 598: <u>11/15</u> MAGNOBOND 6398 PART 1: MAGNOBOND 6398 PART 2: SEALANT PR-1425: <u>11/15</u>								
	***INDICATE ON BOX EXPIRY DATE OF RTV, MAGNOBOND PART1, MAGNOBOND PART2 AND SEALANT PR-1425 ***								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control	*** Enter exp. date in lot maintenance for RTV loctite 598, MAGNOBOND PART1, MAGNOBOND PART2 AND SEALANT PR-1425***								

JUN 19 2015

MCS

JUN 19 2015

15-6-19

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

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133765

647 1305

Required Date: 6/19/15

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 13.07.16 JLM VERIFIED BY:DD IPP
REV:B 14.07.31 AS PER ECN C2 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.0112		Manufactured	No				Each	213.0000					
647 0112 Strut Bracket DAS 6 9-89													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				CCK109			213						
				112215			34						
				122245			5						
				122871			52						
				<u>123318</u>			30						
				M130388			92						
647.1402		Manufactured	No				Each	1.0000					
647 1402 Lower Cutter Assembly DAS 6 9-89													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				CCK048			1						
				<u>123319</u>			1						
647.2011		Manufactured	No				Each	24.0000					
647 2011 Lower Strut DAS 6 9-89													
				<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>				
				Cck021			24						
				123511			8						
				125082			10						
				<u>91803</u>			2						
				92560			4						

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Picklist Print

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Page 2

Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

AN3-11A	Purchased	No	Each	368.0000	**	DAS 27 9-89	DAS 31 9-89
AN3-11A							
Bolt							
DAS 6 9-89							
		<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
		ST338a	368				
		m125709	368				
AN3C10A	Purchased	No	Each	25.0000	**	DAS 27 9-89	DAS 31 9-89
AN3C10A							
Bolt							
DAS 6 9-89							
		<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
		ST349	25				
		m128634	24				
		m129521	1				
MS27039-08-10	Purchased	No	Each	859.0000	**	DAS JUN 27 2015 9-89	
MS27039-08-10							
Screw							
DAS 6 9-89							
		<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
		ST281	859				
		m128799	859				
						DAS 31 9-89	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : _____																					

Picklist Print

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Page 3

Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0332P

Purchased

No

Each

2,774.000

70

NAS1149F0332P

**

Washer

DAS

27

9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

222

122063

222

ST260a

2459

m128401

6

m131026

80

m131697

2373

st268

93

123900

7

m130388

86

NAS1149FN832P

Purchased

No

Each

3,265.000

8

NAS1149FN832P

**

Washer

DAS

27

9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

ST260a

1726

125268

1726

st268

1539

125268

610

M130388

929

MS21042-3

MS21042L3

Purchased

No

Each

592.0000

17

MS21042-3

**

Nut / use MS2104213

DAS

27

9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

501

M129682

501

ST305

91

M128770

10

M129541

15

M130388

66

JUN 18 2015

DAS
31
9-89

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Shop Packet Print

Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

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Page 4

Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

MS21042-08

~~MS21042L08~~

Purchased

No

Each

35.0000

MS21042-08

USE MS21042L08

**

DAS
27
9-89

DAS
31
9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

10

m130388

10

Each

4,770.000

**

DAS
6
9-89
MS21042L4

MS21042L4

Locknut

Purchased

No

Location

Loc Qty

Loc Code

FP001

26

m124231

26

GA

160

m127813

160

ST260a

4062

m130799

56

m131803

6

m132262

1000

m132382

3000

ST305

522

m128300

8

m130388

7

m130922

97

m131618

24

~~m132123~~

386

DAS
27
9-89

JUN 1 2015

DAS
31
9-89

4

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Shop Packet Print

Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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OTHER : ☐					

Picklist Print

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Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

601.2045

Purchased No

Each 44.0000

601-2045
RTV (LOCTITE 598)

**

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK087

25

m125792

25

6/30/15

CCK096

19

m131142

2

m131311

17

DAS
6
9-89

647.2010

Manufactured No

Each 71.0000

647-2010
Upper Strut

**

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK094

71

106783

32

91802

2

91895

31

m123185

3

m125082

3

DAS
6
9-89

AN3-15A

Purchased No

Each 93.0000

AN3-15A
Bolt

**

DAS
27
9-89

Location

Loc Qty

Loc Code

FG

10

114941

10

ST348

83

M128429

8

M132551

75

DAS
6
9-89

JUN 18 2015

DAS
31
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Wednesday, June 17, 2015 1:02:49 PM

Page 6

Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

647.1403

Manufactured No

Each 7.0000

647 1403

Upper Cutter Assembly, U-Channel

DAS
6
9-89

Location

Loc Qty

Loc Code

cck047

7

123306

3

128326

4

Each 40.0000

**

DAS
27
9-89

DAS
31
9-89

91292A080

Purchased No

91292A080

Screw

Location

Loc Qty

Loc Code

ST564

40

M127948

40

Each 42.0000

**

DAS
27
9-89

DAS
31
9-89

93625A300

Purchased No

93625A300

Locknut

DAS
6
9-89

Location

Loc Qty

Loc Code

ST564

42

M127948

42

Each 80.0000

**

DAS
27
9-89

DAS
31
9-89

93475A270

Purchased No

93475A270

Washer

DAS
6
9-89

Location

Loc Qty

Loc Code

ST564

80

M127948

80

**

DAS
27
9-89

DAS
31
9-89

JUN 18 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Wednesday, June 17, 2015 1:02:49 PM

Page 7

Work Order ID: 133765

133765

Parent Item: 647.1305

647 1305

Parent Item Name: EC145 Cable Cutter System Removable Provisions U Channel Compatible

Start Date: 6/18/15

Required Date: 6/19/15

Start Qty: 1.00

Required Qty: 1.00

LN9037-08018

Purchased No

Each 27.0000

1 N9037-08018

Screw

**

Location

Loc Qty

Loc Code

st555

25

M132173

25

ST556

2

M128007

2

Each

72.0000

**

LN9025-0820K

Purchased No

1 N9025-0820K

Lock Tab Washer

Location

Loc Qty

Loc Code

ST556

72

M126230

12

M128007

60

Each

3.0000

**

647.2113

Manufactured No

647 2113

Lower Rail, U-Channel

Location

Loc Qty

Loc Code

CCK108

3

123496

3

Each

5.0000

**

647.1702

Manufactured No

647 1702

Skid Deflector Assembly

Location

Loc Qty

Loc Code

ST043

5

130097

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

REFERENCE ONLY

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NOTES: UNLESS OTHERWISE SPECIFIED

- 1 AFTER INSTALLATION, APPLY F/N 73 A/R TO FILL GAPS AND FILLET EDGES
- 2 APPLY F/N 74 TO FAYING SURFACES
- 3 AT CUSTOMERS OPTION, INSTALL F/N 77 BY MATCH DRILLING ONTO F/N 1
- 4 INSTALL FOR 647.1301, 647.1302.
- 5 INSTALL FOR 647.1304, 647.1305.
- 6 APPLICABLE WHEN EUROCOPTER P/N 145-250014.11 IS INSTALLED WITH EUROCOPTER CABLE CUTTER FIXED PROVISIONS.
- 7 APPLICABLE WHEN REPLACING EUROCOPTER P/N 145-250074.11

DAS
6
9-89

UNINCORPORATED ECN(S)

04485, 04592

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PPS		N/C
N/C	INITIAL RELEASE	06/05/89	P. BRAVO
A	INCORPORATED ECN 02943, 03020, 03045	01/25/91	P. BRAVO
B	INCORPORATED ECN 02919	07/25/93	P. BRAVO
C	INCORPORATED ECN 04009	06/13/93	P. BRAVO

13		13	13		13	26	647.1812	SHIM		
4		4	4		4	25	647.1910	CLIP		
1		1	1		1	24	647.1810	NOSE DOOR DOUBLER		
1		1	1		1	23	647.1818	NOSE DOOR SPACER		
2		2	2		2	22	647.1813	ANGLE		
1		1	1		1	21	647.1913	TEE		
1		1	1		1	20	647.1814	GUSSET, LH		
1		1	1		1	19	647.1815	GUSSET, RH		
1		1	1		1	18	647.1915	SUPPORT ANGLE		
2		2	2		2	17	647.2011	LOWER STRUT		
1		1	1		1	16	647.1914	BRACKET		
1		1	1		1	15	647.1816	SUPPORT, LH		
1		1	1		1	14	647.1817	SUPPORT, RH		
1		1	1		1	13	647.1912	BRACKET, LH		
1		1	1		1	12	647.1911	BRACKET, RH		
4		4	4		4	11	647.0112	STRUT BRACKET		
					1	10	647.2110	LOWER RAIL		
					1	9	647.2111	UPPER RAIL		
1		1	1		1	8	647.1610	WIPER DEFLECTOR, FWD		
1		1	1		1	7	647.1601	WIPER DEFLECTOR ASSY, AFT		
					2	6	647.1701	SKID DEFLECTOR ASSY		
1		1	1		1	5	647.3201	GROUNDING CABLE ASSY		
1		1	1		1	4	647.2201	CROSS ASSY		
1		1	1		1	3	647.1602	DOUBLER ASSY		
1		1	1		1	2	647.1402	CUTTER ASSY (LOWER)		
					1	1	647.1401	CUTTER ASSY (UPPER)		
							647.1306	FIXED PROVISIONS KIT U CHANNEL		
							647.1305	REMOVABLE PROVISIONS KIT U CHANNEL		
							647.1304	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE		
							647.1303	FIXED PROVISIONS KIT		
							647.1302	REMOVABLE PROVISIONS KIT		
							647.1301	EC145 CABLE CUTTERS KIT		
1306	1305	1304	1303	1302	1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table (Restructured)

QTY	ORIGINAL DATE	DATE	APPROVAL
NEXT ASSY (S)	DESIGNED BY	CHECKED BY	DATE
	R. ROSA MD	D. BARBER	
	DRAWING APPROVAL	P. BRAVO	DATE
	CONTRACT NO.		
	UNLESS OTHERWISE SPECIFIED		
	OTHERWISE APPLICABLE		
	TOLERANCES		
	3 PLACE DECIMALS		
	ANGLES ± .5°		

APICAL INDUSTRIES			
2608 TEMPLE HEIGHTS DR.			
OCEANSIDE, CA. 92056-3512 (760)724-5300			
EC145 CABLE CUTTERS KIT			
SHEET	SCALE	DWG. NO.	REV
B	NONE	647.1300	C
		SHEET 1 OF 9	

DAS
6
9-89

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REFERENCE ONLY

J2	2				85	647.1702	SKID DEFLECTOR ASSY		
1	1				84	647.2113	LOWER RAIL (U CHANNEL KIT)		
1	8				83	601.3655	WASHER	IN9025-0820K	
1	8				82	601.3654	SCREW	IN9037-8018	
1	1				81	647.2112	UPPER U CHANNEL		
1	4				80	601.3653	WASHER	93475A270	
1	2				79	601.3652	LOCKNUT	93625A300	
1	2				78	601.3651	SCREW	91292A080	
1	1				77	647.1403	CUTTER ASSY (UPPER U CHANNEL)		
1	5				76	601.3650	BOLT	AN3-15A	
REF		REF	REF	REF	75	647.5701	GPS MOUNT KIT		
2	2	2	2	2	74	601.1954	SCREW	MS27039-1-17	
2	2	2	2	2	73	647.2010	UPPER STRUT		
1	1	1	1	1	72	601.2045	RTV	LOCTITE 598	
1	1	1	1	1	71	600.1012	SEALANT	PR-1425 CLASS B	
1	1	1	1	1	70	600.0991	MAGNOBOND 6398 PART B		
1	1	1	1	1	69	600.0990	MAGNOBOND 6398 PART A		
4	4	4	4	4	68	601.3012	SCREW	MS27039-1-15	
2	2	2	2	2	67	601.3004	CAMLOC STUD		
2	2	2	2	2	66	601.3005	CAMLOC RETAINER		
2	2	2	2	2	65	601.3006	CAMLOC RECEPTACLE		
3 FT.	3 FT.	3 FT.	3 FT.	3 FT.	64	601.3011	P-SEAL		
1.1 FT.	1.1 FT.	1.1 FT.	1.1 FT.	1.1 FT.	63	601.3007	GROMMET	MS21266-2N	
2	2	2	2	2	62	601.3008	INSERT	NAS1834C-300	
11	11	11	11	11	61	601.2991	RIVET	CR3213-4-6	
2	2	2	2	2	60	601.1039	RIVET	CR3213-4-2	
8	8	8	8	8	59	601.1183	RIVET	CR3213-4-5	
.1306	.1305	.1304	.1303	.1302	.1301	FINISH	PART #	DESCRIPTION	MATL SPEC.

BOM Table (Restructured)

22	22	22	22	22	58	601.0790	RIVET	CR3213-4-3	
8	8	8	8	8	57	601.2995	RIVET	CR3213-6-6	
4	4	4	4	4	56	601.1915	RIVET	CR3213-4-4	
12	12	12	12	12	55	601.2207	NUTPLATE RIVET	CCR2645S-3-03	
4	4	4	4	4	54	601.1983	NUTPLATE RIVET	CCR2745S-3-03	
12	12	12	12	12	53	601.2980	NUTPLATE RIVET	CCR2645S-3-04	
12	12	12	12	12	52	600.0795	NUTPLATE	MS21047-3	
4	4	4	4	4	51	601.3209	LOCKNUT	MS21042L4	
5	9	5	4	9	50	601.2973	LOCKNUT	MS21042-08	
29	46	29	16	45	49	601.2943	LOCKNUT	MS21042-3	
3	3	3	3	3	48	601.2375	WASHER		
10	18	10	8	18	47	601.2764	WASHER	NAS1149FN832P	
70	32	70	32	102	46	601.1607	WASHER	NAS1149F0332P	
1	1	1	1	1	45	601.2525	SCREW	MS27039-0807	
4	4	4	4	4	44	601.1952	SCREW	MS27039-1-20	
4	4	4	4	4	43	601.3010	SCREW	MS27039-0810	
4	4	4	4	4	42	601.3224	SCREW	AN525-10R12	
6	6	6	6	6	41	601.1365	SCREW	MS27039-1-10	
3	3	3	3	3	40	601.2198	SCREW	MS27039-1-07	
3	3	3	3	3	39	601.2999	SCREW		
18	18	18	18	18	38	601.2459	SCREW	MS27039C1-06	
4	4	4	4	4	37	601.1622	SCREW	MS27039-1-14	
10	10	10	10	10	36	601.2051	SCREW	MS24694C52	
2	2	2	2	2	35	601.2823	BOLT	AN3-4A	
1	1	1	1	1	34	601.1324	BOLT	AN4CH6A	
2	2	2	2	2	33	601.1874	BOLT	AN3C10A	
12	12	16	16	32	32	601.2826	BOLT	AN3-11A	
8	8	8	8	8	31	601.2638	WASHER	NAS1149F0432P	
4	4	4	4	4	30	601.3002	BOLT	NAS6604-66	
2	2	2	2	2	29	647.1811	SPACER		
4	4	4	4	4	28	647.2511	NUT		
4	4	4	4	4	27	647.2510	SLEEVE		
.1306	.1305	.1304	.1303	.1302	.1301	FINISH	PART #	DESCRIPTION	MATL SPEC.

BOM Table (Restructured)

ORIGINAL DATE: 02-01-06		APICAL INDUSTRIES	
DRAWN BY: J. BARBER		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. BARBER		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL: P. BRAVO DE ROSA		EC145 CABLE CUTTERS KIT	
CONTRACT NO.		REV. C	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		SCALE: NONE	
TOLERANCES ARE:		SHEET 2 OF 9	
2 PLACE DECIMALS ±.00			
3 PLACE DECIMALS ±.005			
ANGLES ±.5°			

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04592				SHEET 1 OF 1	
DWG NO. 647.1300		REV: C	PREPARED BY: J. BECKER	DATE: 06/19/14	EFFECT ON DWG ☐ INC. ☒ UNINC.
DWG TITLE: EC145 CABLE CUTTERS KIT					
APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT STOCK	

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED BOM.

ACTION LIST:
1. ADD F/N 11 TO ALL CURRENT KITS IN STOCK
2. UPDATE III145-2 & ICA145-2

REFERENCE ONLY

DAS
6
9-89

11	R	647.0112	8	8			STRUT BRACKET		
F/N	TC	PART NUMBER	QTY				DESCRIPTION	MATERIAL	SPECIFICATION
			.1306	.1305	.1304	.1303			
DOCUMENTS EFFECTED:							☐ MDL ☒ INSTALL INSTRU ☒ ICA ☒ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO